

IN THE CLAIMS

Claims 2-5 and 7-17 are pending in this application. Please cancel claims 1 and 6 without prejudice or disclaimer, amend claims 2-5, 7-8, and 16-17 as follows:

1. (Canceled)
2. (Currently Amended) [[The]] A multi-mode antenna according to claim 1, comprising:
a radiating conductor which radiates electromagnetic waves with a plurality of frequencies;
a first one-port resonant circuit connected to one end of the radiating conductor;
a second one-port resonant circuit connected to the other end of the radiating conductor; and
a single feeding point which is common for the plurality of frequencies and connected to the first one-port resonant circuit,
wherein said first one-port resonant circuit is connected between one end of said radiating conductor and a ground potential point, said second one-port resonant circuit is connected between the other end of said radiating conductor and the ground potential point, and said feeding point is a connection point at which the first one-port resonant circuit and the one end of the radiation conductor are connected.
3. (Currently Amended) [[The]] A multi-mode antenna according to claim 1, comprising:
a radiating conductor which radiates electromagnetic waves with a plurality of frequencies;
a first one-port resonant circuit connected to one end of the radiating conductor;
a second one-port resonant circuit connected to the other end of the radiating conductor; and
a single feeding point which is common for the plurality of frequencies and connected to the first one-port resonant circuit,

wherein said first one-port resonant circuit is connected between one end of said radiating conductor and said feeding point, and said second one-port resonant circuit is connected between the other end of said radiating conductor and [[the]] a ground potential point.

4. (Currently Amended) [[The]] A multi-mode antenna, according to claim 1, further comprising:

a radiating conductor which radiates electromagnetic waves with a plurality of frequencies;

a first one-port resonant circuit connected to one end of the radiating conductor;

a second one-port resonant circuit connected to the other end of the radiating conductor;

a single feeding point which is common for the plurality of frequencies and connected to the first one-port resonant circuit; and

a third one-port resonant circuit connected between one end of said radiating conductor and [[the]] a ground potential point,

wherein said first one-port resonant circuit is connected between one end of said radiating conductor and said feeding point, and said second one-port resonant circuit is connected between the other end of said radiating conductor and [[the]] a ground potential point.

5. (Currently Amended) [[The]] A multi-mode antenna, according to claim 1, comprising:

a radiating conductor which radiates electromagnetic waves with a plurality of frequencies;

a first one-port resonant circuit connected to one end of the radiating conductor;

a second one-port resonant circuit connected to the other end of the radiating conductor; and

a single feeding point which is common for the plurality of frequencies and connected to the first one-port resonant circuit,

wherein an imaginary part of admittance or impedance in view from said one end of said radiating conductor toward the radiating conductor has a value which alternates between positive and negative signs with frequency increase in said plurality of frequencies.

6. (Canceled)
7. (Currently Amended) [[The]] A multi-mode antenna according to claim 1, comprising:
a radiating conductor which radiates electromagnetic waves with a plurality of frequencies;
a first one-port resonant circuit connected to one end of the radiating conductor;
a second one-port resonant circuit connected to the other end of the radiating conductor; and
a single feeding point which is common for the plurality of frequencies and connected to the first one-port resonant circuit,
wherein said radiating conductor is spatially divided into parts which are electrically connected by a one-port resonant circuit.
8. (Currently Amended) [[The]] A multi-mode antenna according to claim 1, comprising:
a radiating conductor which radiates electromagnetic waves with a plurality of frequencies;
a first one-port resonant circuit connected to one end of the radiating conductor;
a second one-port resonant circuit connected to the other end of the radiating conductor; and
a single feeding point which is common for the plurality of frequencies and connected to the first one-port resonant circuit,
wherein the sum of the number of poles and the number of zeros in an equivalent circuit representation of the first one-port resonant circuit connected to said

one end of said radiating conductor is equal to the number of said plurality of frequencies.

9. (Original) The multi-mode antenna according to claim 4,

wherein the sum of the number of poles and the number of zeros in equivalent circuit representations of said first one-port resonant circuit and said third one-port resonant circuit connected to said one end of said radiating conductor is equal to the number of said plurality of frequencies.

10. (Original) A multi-mode antenna comprising:

a radiating conductor which radiates electromagnetic waves with a plurality of frequencies,

a first one-port resonant circuit connected to one end of the radiating conductor,

a second one-port resonant circuit connected to the other end of the radiating conductor,

a single feeding point which is common for the plurality of frequencies and connected to the first one-port resonant circuit, and

a multilayer structure of a laminate of a plurality of substrates comprising top, intermediate and bottom layers,

wherein a part of the radiating conductor is formed on the top layer, the first one-port resonant circuit and the second one-port resonant circuit are formed on the intermediate layer, the feeding point is formed on a side surface of the multilayer structure, and a ground conductor having ground potential is formed on the bottom layer.

11. (Original) The multi-mode antenna according to claim 10,

wherein another intermediate layer is formed between said top layer and said intermediate layer and a shielding conductor to suppress electromagnetic coupling between said radiating conductor and said first one-port resonant circuit as well as said second one-port resonant circuit is formed on the another intermediate layer.

12. (Original) The multi-mode antenna according to claim 11,

wherein said shielding conductor is electrically connected to the ground potential.

13. (Original) The multi-mode antenna according to claim 10,
wherein said first one-port resonant circuit and said second one-port resonant circuit are formed as spiral conductors.
14. (Original) The multi-mode antenna according to claim 10,
wherein said first one-port resonant circuit and said second one-port resonant circuit are formed as meandering conductors.
15. (Original) The multi-mode antenna according to claim 10,
wherein said plurality of substrates are made of a radio frequency material selected from a group comprising dielectric substances and magnetic substances.
16. (Currently Amended) The multi-mode antenna according to claim 15,
wherein, when said plurality of insulating substrates are made of a dielectric substance, the plurality of substrates have different permittivity values each other and the permittivity of an upper-layer substrate is lower than that of a lower-layer substrate.
17. (Currently Amended) The multi-mode antenna according to claim 15,
wherein, when said plurality of insulating substrates are made of a magnetic substance, the plurality of substrates have different permeability values each other and the permeability of an upper-layer substrate is lower than that of a lower-layer substrate.

18-20. (Cancelled)